

Organization 2800 Bldg./Room Jeff

U. S. DEPARTMENT OF COMMERCE  
COMMISSIONER FOR PATENTS

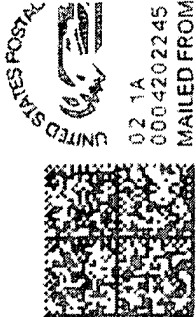
P.O. BOX 1450

ALEXANDRIA, VA 22313-1450

IF UNDELIVERABLE RETURN IN TEN DAYS

OFFICIAL BUSINESS

AN EQUAL OPPORTUNITY EMPLOYER



UNDELIVERABLE AS  
ADDRESSED  
UNABLE TO FORWARD

*Handwritten signature/initials inside a rectangular box.*

*Handwritten signature/initials.*



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/893,963	06/29/2001	Young Tae Yang	8733.441.00	6103

7590 03/02/2004  
LONG ALDRIDGE & NORMAN, LLP  
701 PENNSYLVANIA AVENUE N.W.  
SUITE 600  
WASHINGTON, DC 20004

EXAMINER

NORRIS, JEREMY C

ART UNIT PAPER NUMBER

2827

DATE MAILED: 03/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

RECEIVED  
MAR 22 2004  
TECHNOLOGY CENTER 2800

## Office Action Summary

**Application No.**

09/893,963

**Applicant(s)**

YANG ET AL

**Examiner**

Jeremy C. Norris

**Art Unit**

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4 and 8-21 is/are rejected.
- 7) ☒ Claim(s) 3 and 5-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2-21-03 . 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Priority*

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,748,293 (hereafter Kikuchi).

Kikuchi discloses, referring to figures 2a-c, a flexible circuit film, comprising: a body (11); a first pad (2) provided at one end of the body to be adhesively connected to a pad of a first printed circuit board a second pad provided at other end of the body to be engaged to a connector of a second printed circuit board and least one recess (10) defined in the body [claim 1] wherein the recess is defined in the body in a region adjacent to second pad [claim 2], wherein the body has at least one bent portion (portion near reference character 8 in figure 2a) [claim 4], wherein said at least one recess has a substantially concave shape [claim 8] wherein the at least one recess has a substantially curved shape [claim 9].

Claims 10-21 rejected under 35 U.S.C. 102(b) as being anticipated by US 5,917,158 (hereafter Takao).

Takao discloses, referring to figures 1 & 2, a flexible printed circuit film comprising, a body having a first portion (3) and a second portion (2) the first portion intersecting the second portion to form a corner portion (near reference 9), the corner portion having an inner vertex and an outer vertex; a first pad (7a) connected at an end of the first portion; a second pad (6b) connected at an end of the second portion; and a recess (near reference character 9, under reference character 3a, or under reference 8) in the body [claim 10], wherein the first recess has a substantially concave shape [claim 11], wherein the first recess has a substantially curved shape [claim 12], wherein the first portion is substantially perpendicular to the second portion [claim 13], wherein the first recess is at the inner vertex of the corner portion [claim 14], further comprising a second recess (under reference character 3a) in a region of the second portion of the body, the region being between the outer vertex of the corner portion and the second pad [claim 15], wherein the second recess has a substantially concave shape [claim 16], wherein the second recess has a substantially curved shape [claim 17], wherein the first recess (under reference character 8) is at a region between the inner vertex and the second pad [claim 18], further comprising a second recess (under reference character 3a) in a region between the outer vertex of the corner portion and the second pad [claim 19], wherein the second recess has a substantially concave shape [claim 20], wherein the second recess has a substantially curved shape [claim 21].

***Allowable Subject Matter***

Claims 3 and 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: Claim 3 states the limitation "wherein the recess is defined in at least two side surfaces of the body in the region adjacent to the second pad". This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art. Claim 5 states the limitation "wherein the at least one recess is defined at each of the at least two side surfaces in a region adjacent to the bent portion. This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art. Claim 6 states the limitation "wherein a first recess is defined at the bent portion and said at least one recess is defined in the body in a region adjacent to the second pad". This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art. Claim 7 states the limitation "wherein said at least one recess is defined at the bent portion". This limitation, in conjunction with the other claimed limitations was neither found to be disclosed in, nor suggested by the prior art.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 3,267,402      Reimer,

Art Unit: 2827

US 4,955,239      Cage et al.,

US 5,903,440      Blazier et al..

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy C. Norris whose telephone number is 571-272-1932. The examiner can normally be reached on Monday - Friday, 9:30 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JCSN

*David A. Zarneke*  
David A. Zarneke  
Primary Examiner  
AU 2827  
2/20/4

**Notice of References Cited**

Application/Control No.

09/893,963

Applicant(s)/Patent Under

Reexamination

YANG ET AL

Examiner

Jeremy C. Norris

Art Unit

2827

Page 1 of 1

**U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-3,267,402	08-1966	REIMER WILLIAM A	336/200
	B	US-4,748,293	05-1988	Kikuchi et al.	174/268
	C	US-4,955,239	09-1990	Cage et al.	73/861.355
	D	US-5,903,440	05-1999	Blazier et al.	361/749
	E	US-5,917,158	06-1999	Takao et al.	174/254
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

**FOREIGN PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

**NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

\*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)  
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Sheet 1 of 1

**Complete if Known**

Application Number	09/893,963
Filing Date	June 29, 2001
First Named Inventor	Young Tae YANG
Art Unit	TBA
Examiner Name	TBA
Attorney Docket Number	8733.441.00

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA				
	AB				
	AC				
	AD				
	AE				
	AF				
	AG				

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> -Number <sup>4</sup> -Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
	BA	DE 198 56 839 A1	6/21/2000	Loibl Josef		
	BB	DE 691 05 042 T2	3/30/1993	Cesar Charles		
	BC	JP 0 5 155 044 A	6/22/1993	Ito Kiyoshi et al.		
	BD					
	BE					
	BF					

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See attached Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the application number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Examiner Signature	Geremy Norris	Date Considered	2-6-04
--------------------	---------------	-----------------	--------

**NOTICE OF OFFICE PLAN TO CEASE SUPPLYING COPIES OF CITED U.S. PATENT  
REFERENCES WITH OFFICE ACTIONS, AND PILOT TO EVALUATE THE  
ALTERNATIVE OF PROVIDING ELECTRONIC ACCESS TO SUCH U.S. PATENT  
REFERENCES**

**Summary**

The United States Patent and Trademark Office (Office or USPTO) plans in the near future to: (1) cease mailing copies of U.S. patents and U.S. patent application publications (US patent references) with Office actions except for citations made during the international stage of an international application under the Patent Cooperation Treaty and those made during reexamination proceedings; and (2) provide electronic access to, with convenient downloading capability of, the US patent references cited in an Office action via the Office's private Patent Application Information Retrieval (PAIR) system which has a new feature called "E-Patent Reference." Before ceasing to provide copies of U.S. patent references with Office actions, the Office shall test the feasibility of the E-Patent Reference feature by conducting a two-month pilot project starting with Office actions mailed after December 1, 2003. The Office shall evaluate the pilot project and publish the results in a notice which will be posted on the Office's web site ([www.USPTO.gov](http://www.USPTO.gov)) and in the Patent Official Gazette (O.G.). In order to use the new E-Patent Reference feature during the pilot period, or when the Office ceases to send copies of U.S. patent references with Office actions, the applicant must: (1) obtain a digital certificate from the Office; (2) obtain a customer number from the Office, and (3) properly associate applications with the customer number. The pilot project does not involve or affect the current Office practice of supplying paper copies of foreign patent documents and non-patent literature with Office actions. Paper copies of references will continue to be provided by the USPTO for searches and written opinions prepared by the USPTO for international applications during the international stage and for reexamination proceedings.

**Description of Pilot Project to Provide Electronic Access to Cited U.S. Patent References**

On December 1, 2003, the Office will make available a new feature, E-Patent Reference, in the Office's private PAIR system, to allow more convenient downloading of U.S. patents and U.S. patent application publications. The new feature will allow an authorized user of private PAIR to download some or all of the U.S. patents and U.S. patent application publications cited by an examiner on form PTO-892 in Office actions, as well as U.S. patents and U.S. patent application publications submitted by applicants on form PTO/SB08 (1449) as part of an IDS. The retrieval of some or all of the documents may be performed in one downloading step with the documents encoded as Adobe Portable Document format (.pdf) files, which is an improvement over the current page-by-page retrieval capability from other USPTO systems.

references. The Office plans to continue to provide access to the E-Patent Reference feature during its evaluation of the pilot.

### Comments

Comments concerning the E-Patent Reference feature should be in writing and directed to the Electronic Business Center (EBC) at the USPTO by electronic mail at [eReference@uspto.gov](mailto:eReference@uspto.gov) or by facsimile to (703) 308-2840. Comments will be posted and made available for public inspection. To ensure that comments are considered in the evaluation of the pilot project, comments should be submitted in writing by January 15, 2004.

Comments with respect to specific applications should be sent to the Technology Centers' customer service centers. Comments concerning digital certificates, customer numbers, and associating customer numbers with applications should be sent to the Electronic Business Center (EBC) at the USPTO by facsimile at (703) 308-2840 or by e-mail at [EBC@uspto.gov](mailto:EBC@uspto.gov).

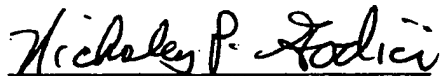
### Implementation after Pilot

After the pilot, its evaluation, and publication of a subsequent notice as indicated above, the Office expects to implement its plan to cease mailing paper copies of U.S. patent references cited during examination of non provisional applications on or after February 2, 2004; although copies of cited foreign patent documents, as well as non-patent literature, will still be mailed to the applicant until such time as substantially all applications have been scanned into IFW.

### For Further Information Contact

Technical information on the operation of the IFW system can be found on the USPTO website at <http://www.uspto.gov/web/patents/ifw/index.html>. Comments concerning the E-Patent Reference feature and questions concerning the operation of the PAIR system should be directed to the EBC at the USPTO at (866) 217-9197. The EBC may also be contacted by facsimile at (703) 308-2840 or by e-mail at [EBC@uspto.gov](mailto:EBC@uspto.gov).

Date: 12/1/03

  
Nicholas P. Godici  
Commissioner for Patents